

NOAA Climate Science & Services

Monthly Climate Update

A look back at July and a preview for Fall (Sept. to Nov.)

Jake Crouch

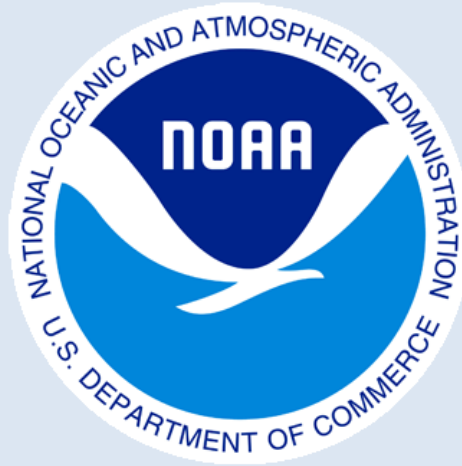
Climate Scientist, Climate Monitoring Branch,
NOAA's National Climatic Data Center

Ed O'Lenic

Seasonal Forecaster, Operations Branch
NOAA's Climate Prediction Center

Dr. Jim Angel

State Climatologist
Illinois State Water Survey Prairie Research
Institute & Univ. of Illinois Urbana-Champaign

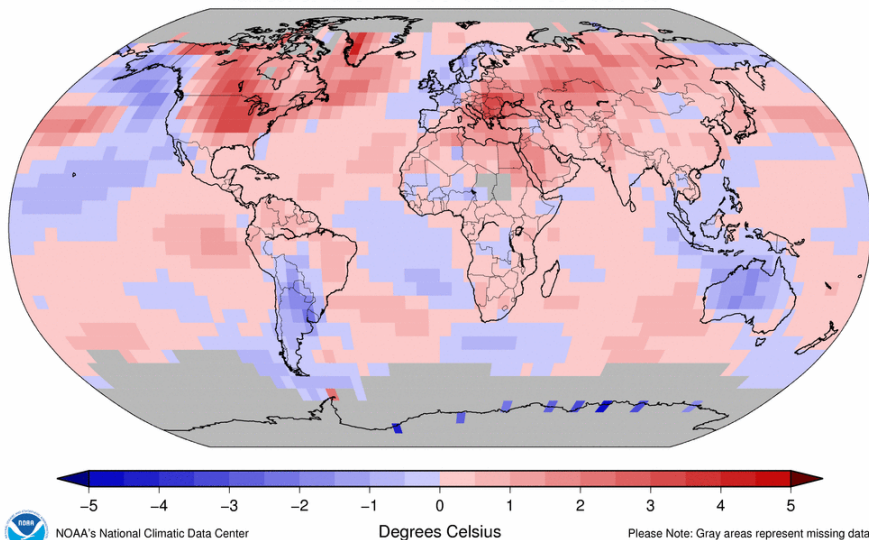


Global Climate Highlights

Land & Ocean Temperature Anomalies Jul 2012

(with respect to a 1981–2010 base period)

Data Source: GHCN–M version 3.1.0 & ERSST version 3b



July 2012 Temperatures:

- 4th warmest July globally (+0.62°C/+1.12°F)
- Land: 3rd warmest; Ocean: 7th warmest
- N. Hemisphere: 2nd warmest July
- January–July: 10th warmest (tied 2001)

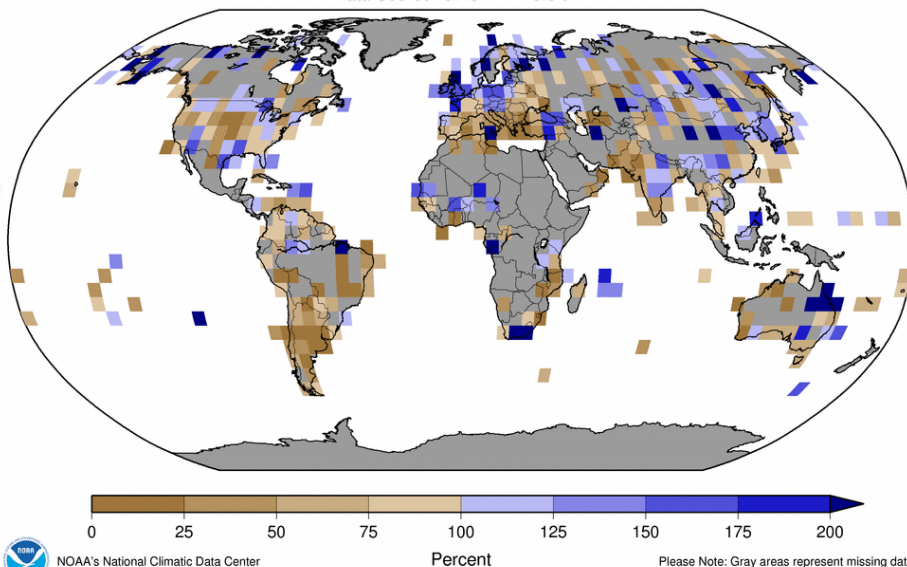
Regional Analysis:

- N. America warmer than average
- U.K has coolest July since 2000
- Australia minimum temps 8th coolest on record

Land–Only Precipitation Percent of Normal Jul 2012

(with respect to a 1961–1990 base period)

Data Source: GHCN–M version 2



July 2012 Precipitation:

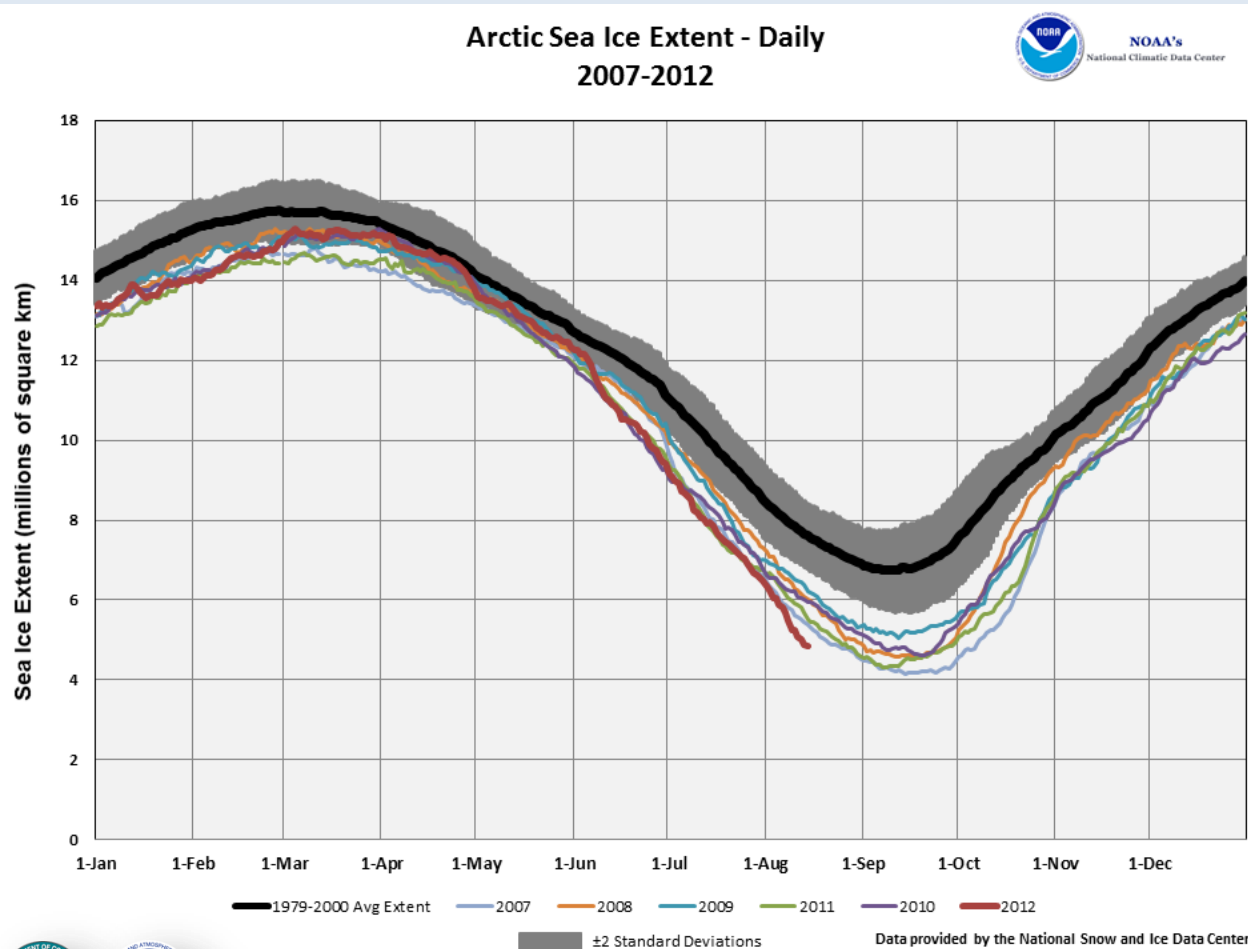
- No tropical storms in N. Atlantic Basin.
- Typhoons Vincente & Saola hit SE Asia
- Parts of Argentina have driest July in 50+ years
- Below-average monsoonal rains in India

Dry: Brazil, southern Europe, India, western Aus.

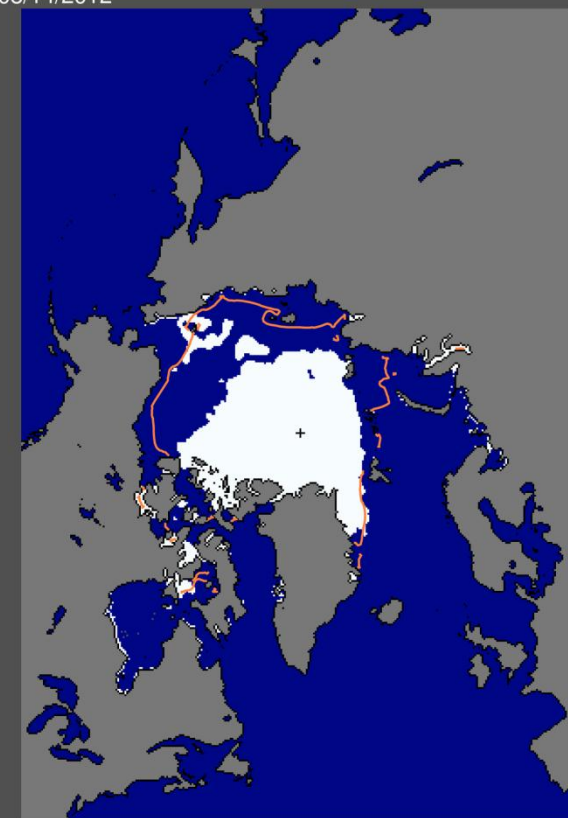
Wet: U.K., China, S. Africa, Queensland Aus.

Global Climate Highlights

- 2nd smallest July Arctic sea ice extent
- Massive ice lost during July: 2.97 million square km
- August 14th: Arctic sea ice among the four lowest summer minimums



Sea Ice Extent
08/14/2012



National Snow and Ice Data Center, Boulder, CO

U.S. Climate Highlights

Nationally: Warmest Month on Record – 77.6°F

July: National temperatures 0.2°F warmer than July 1936

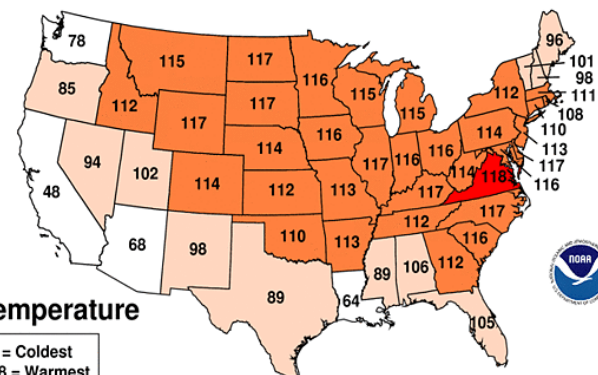
- Monthly temperatures 3.3°F above average
- Footprint of warm temperatures led to record month

Year-to-Date: First seven months of 2012 record warm

- 33 states record warm for January-July
- Only the Pacific Northwest near-average for the period
- If Aug-Dec near-average, 2012 will be warmest year on record

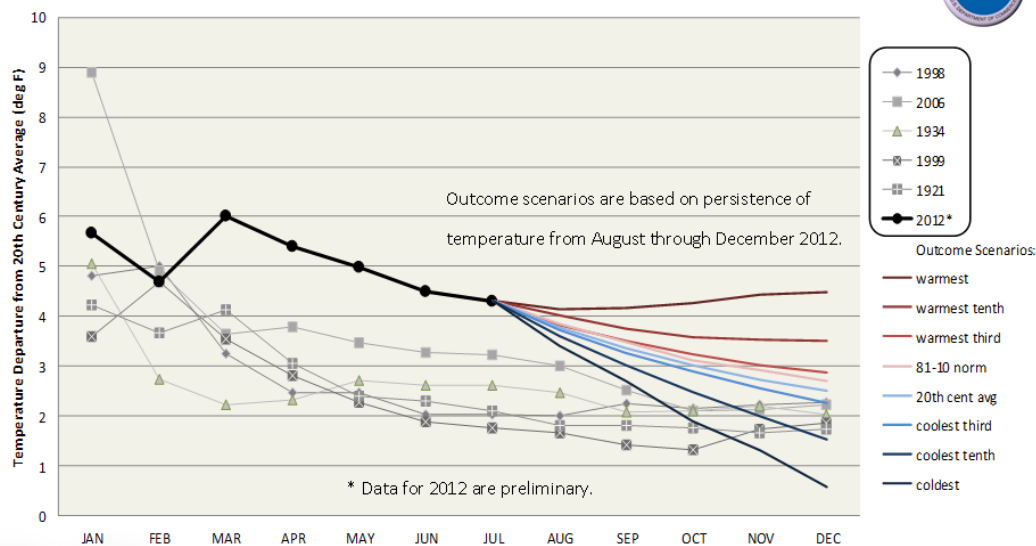
July 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



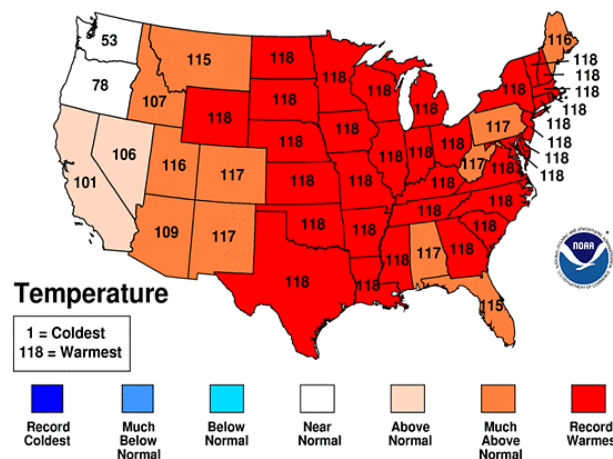
Year-to-Date Temperature Anomalies for Contiguous U.S. - 5 Warmest Years with 2012 Outcomes Based on Historical Values

NOAA's National Climatic Data Center



January-July 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



U.S. Climate Highlights

Nationally: 28th Driest July / 15th Driest Year-to-Date

Drought conditions for nearly two-thirds of contiguous United States

July

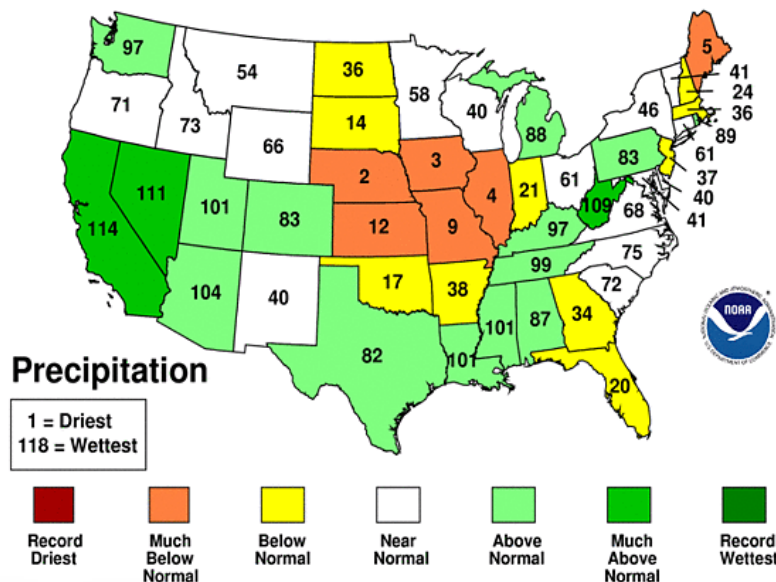
- Wet in Southwest, Gulf Coast, and Appalachians
- Dry in Central Plains, Midwest, and New England

Year-to-Date

- Wet in Pacific Northwest, Upper Midwest
- Dry in Rockies, Midwest, Mid-South, Northeast

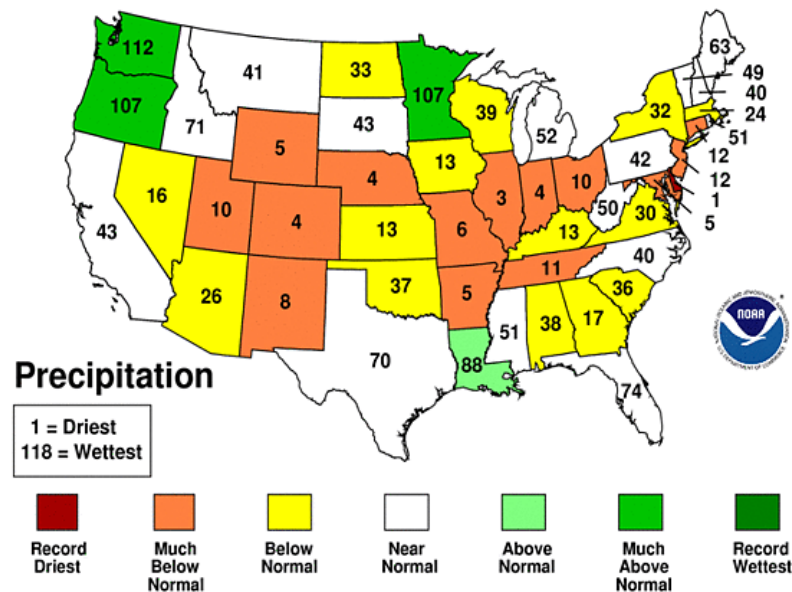
July 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



January-July 2012 Statewide Ranks

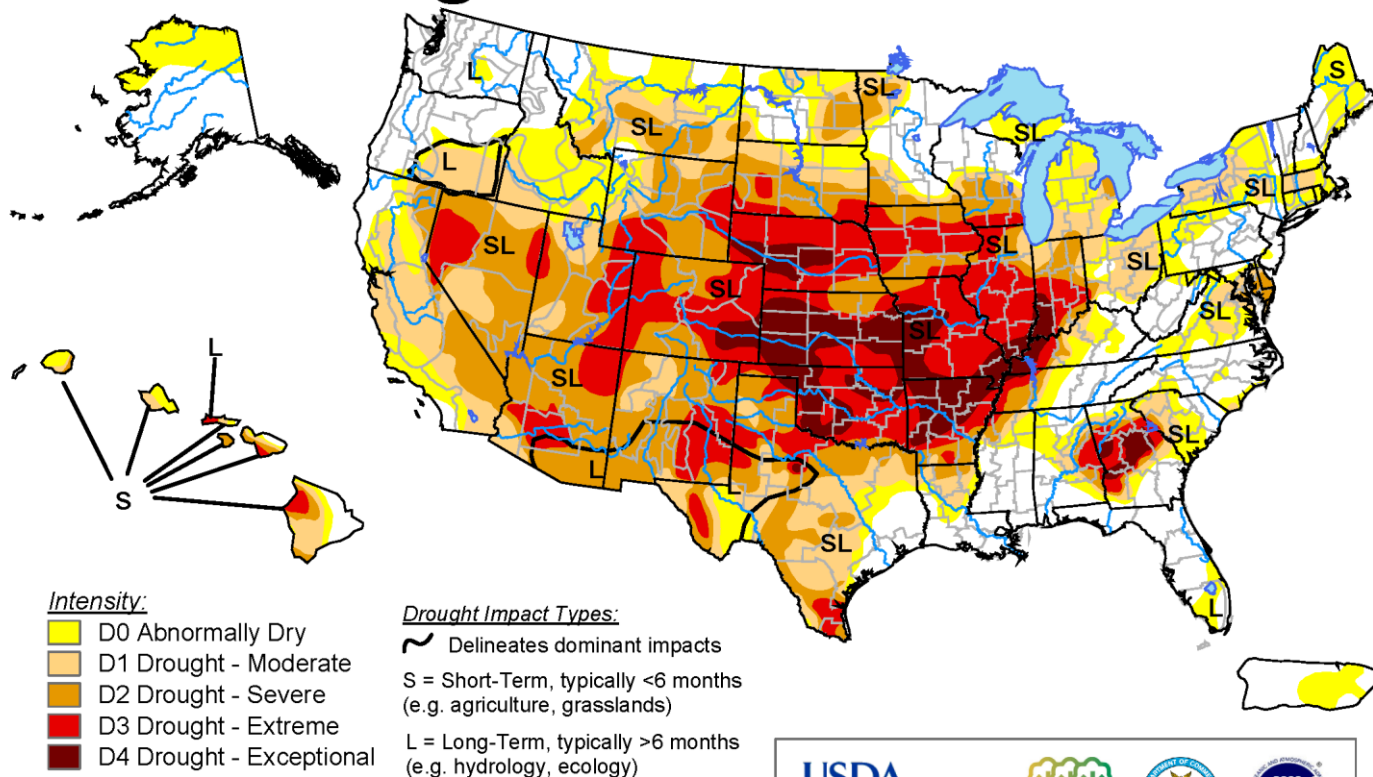
National Climatic Data Center/NESDIS/NOAA



Drought Impacts

U.S. Drought Monitor

August 14, 2012
Valid 7 a.m. EDT



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

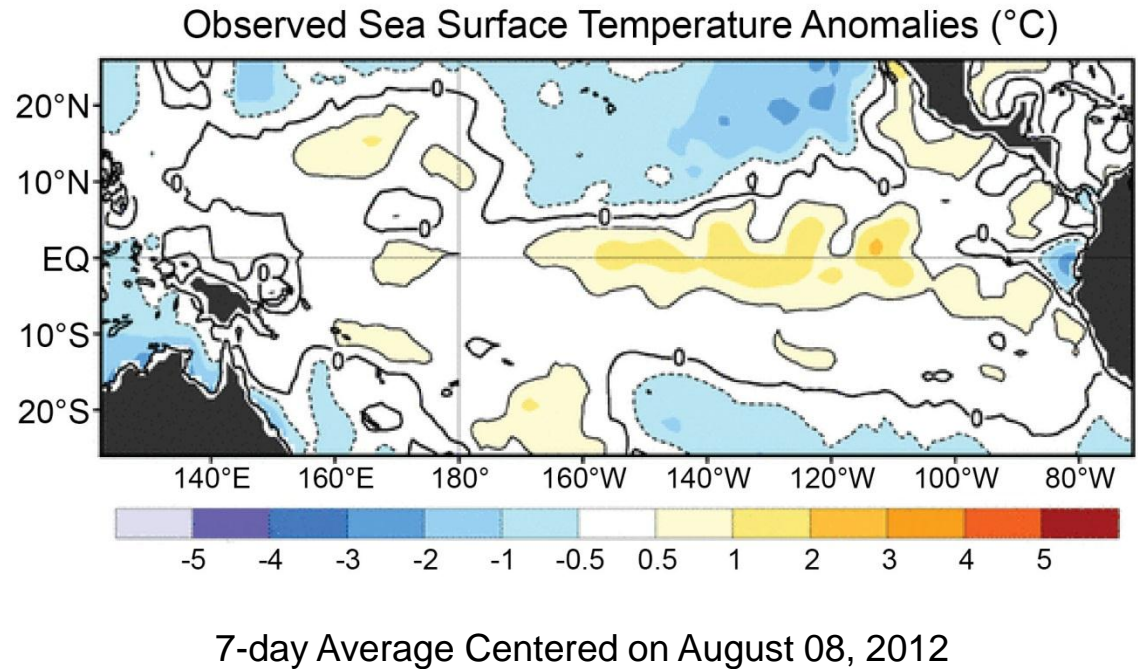
<http://droughtmonitor.unl.edu/>

Released Thursday, August 16, 2012

Author: Michael Brewer/Liz Love-Brotak, NOAA/NESDIS/NCDC

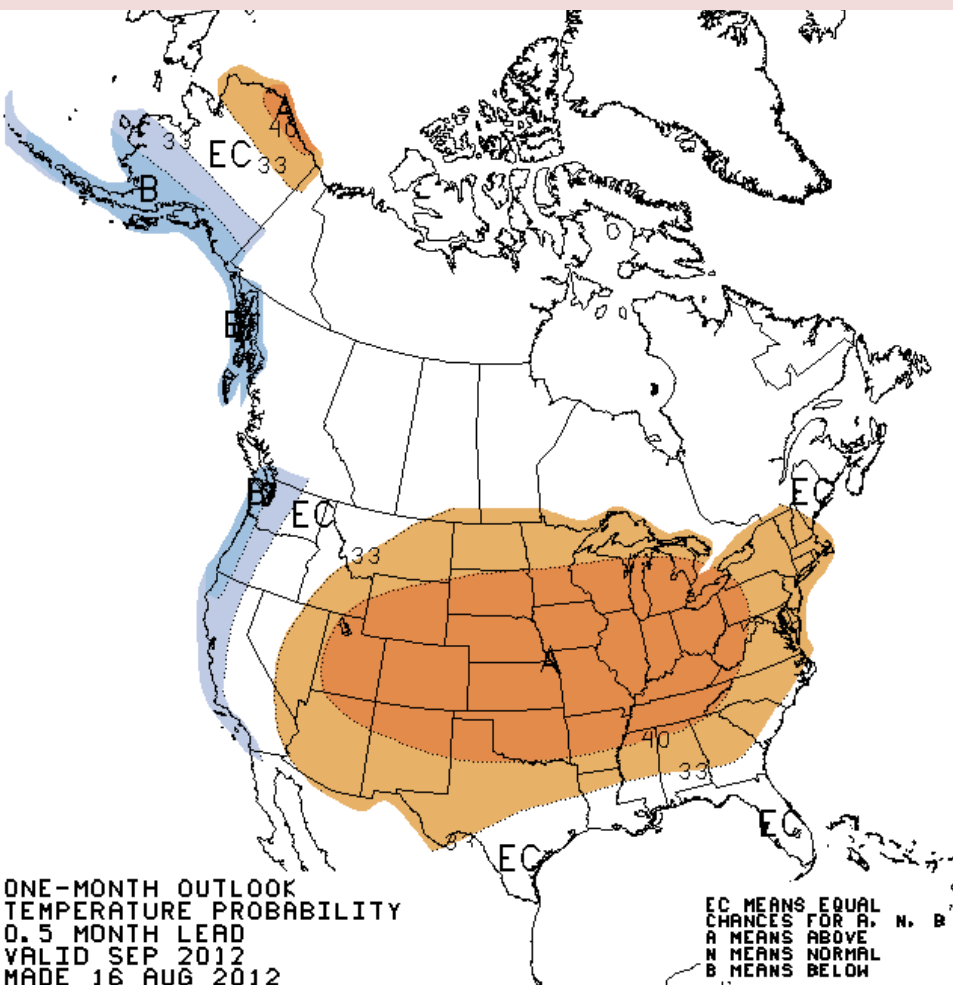
El Niño/La Niña Southern Oscillation (ENSO) Sea Surface Temperature Update

**ENSO Neutral Conditions;
Warmer than normal
East Pacific temperatures**

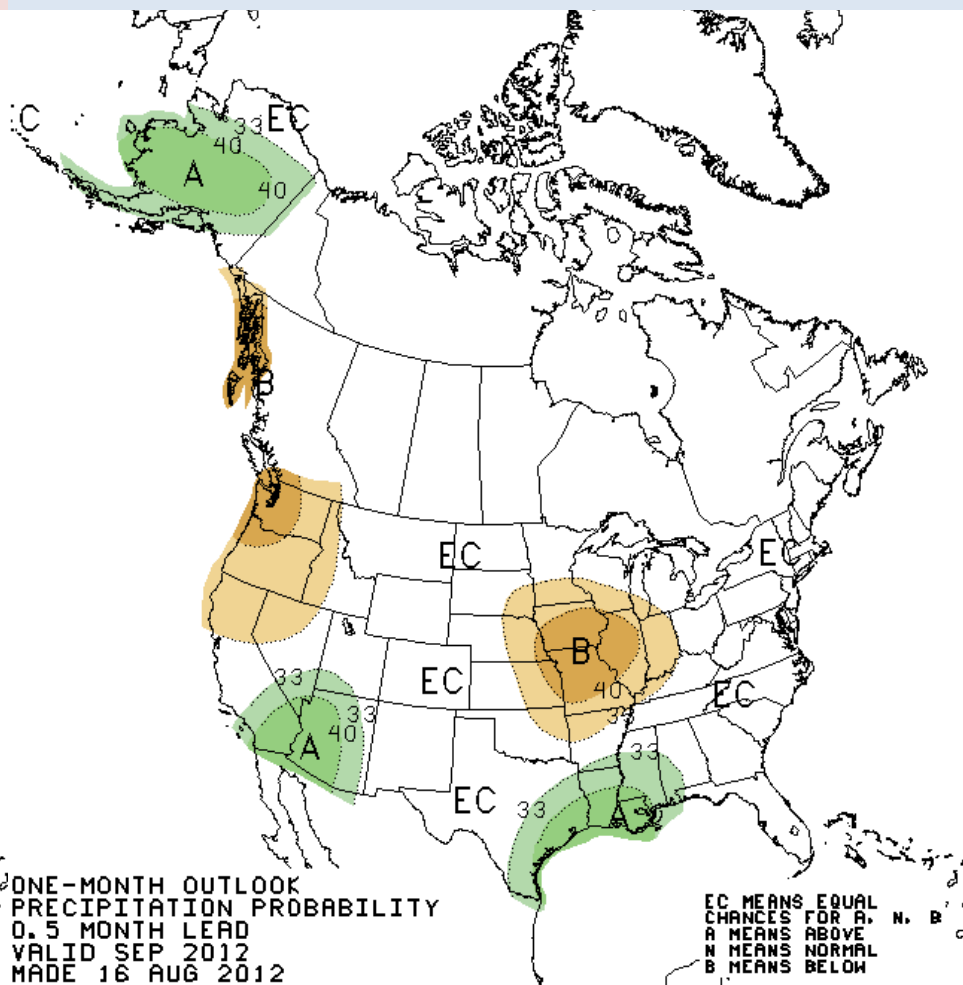


1-Month Temperature and Precipitation Forecast

SEPTEMBER AVERAGE TEMPERATURE PROBABILITY

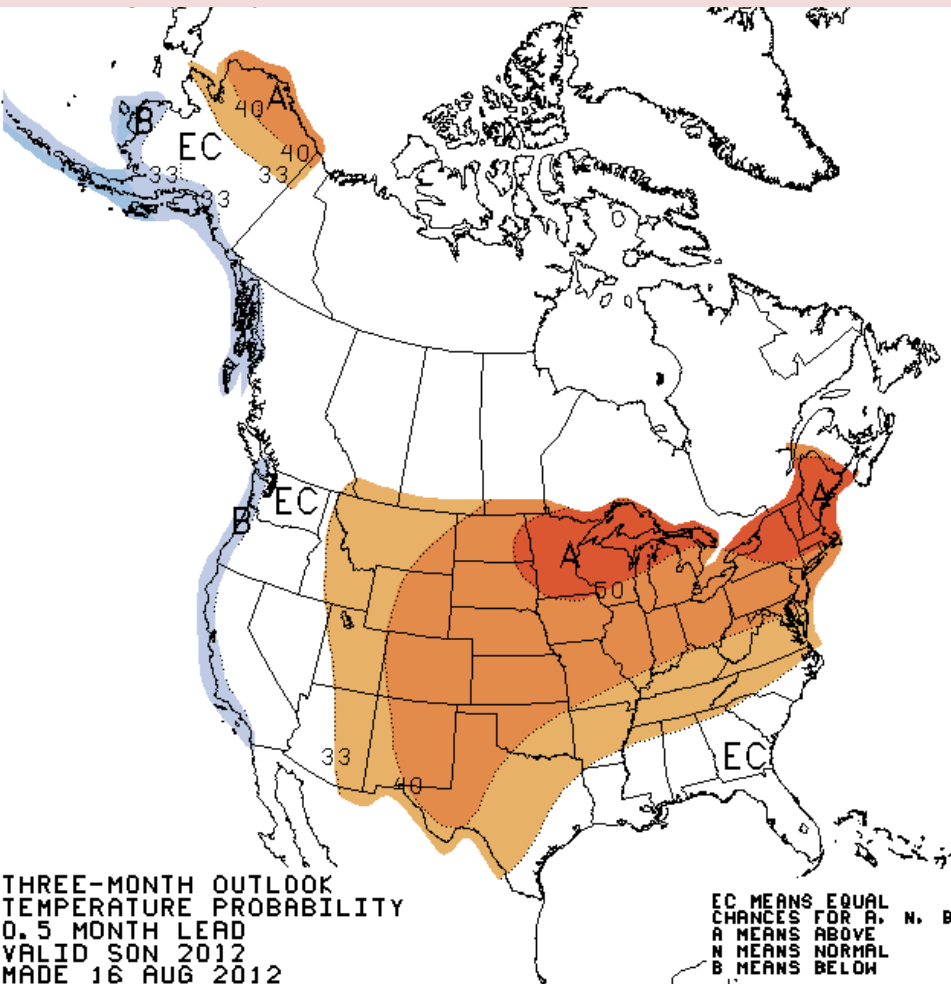


SEPTEMBER TOTAL PRECIPITATION PROBABILITY

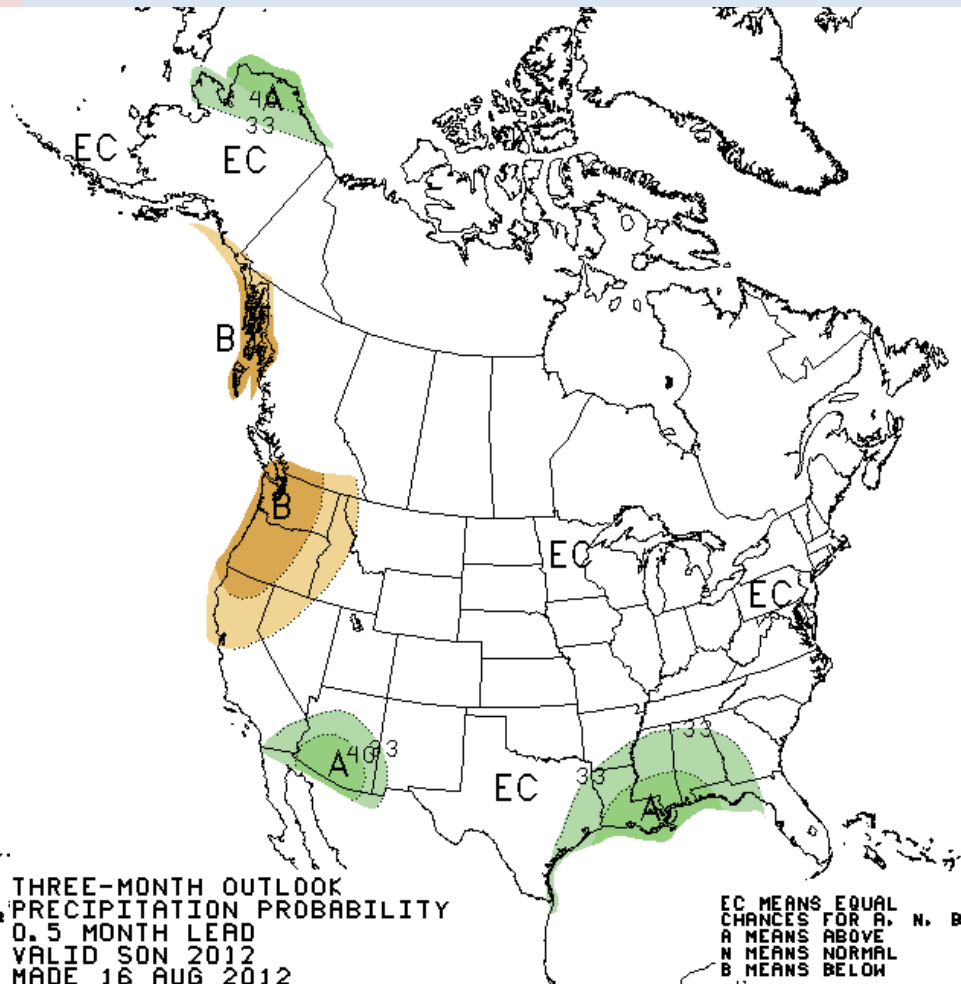


3-Month Temperature and Precipitation Forecast

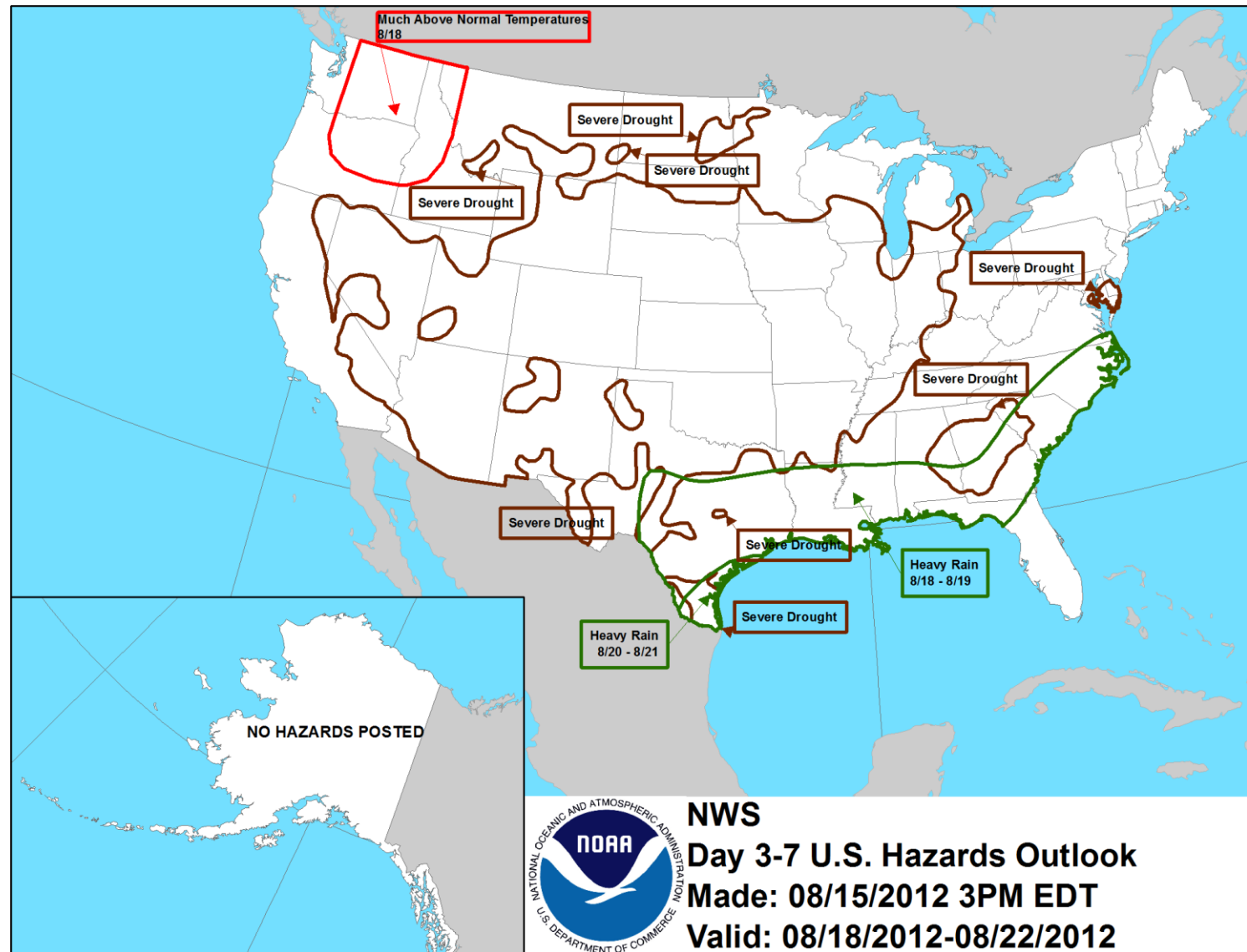
SEP-OCT-NOV AVERAGE TEMPERATURE PROBABILITY



SEP-OCT-NOV TOTAL PRECIPITATION PROBABILITY



Latest U.S. Hazards Outlook for Days 3-14

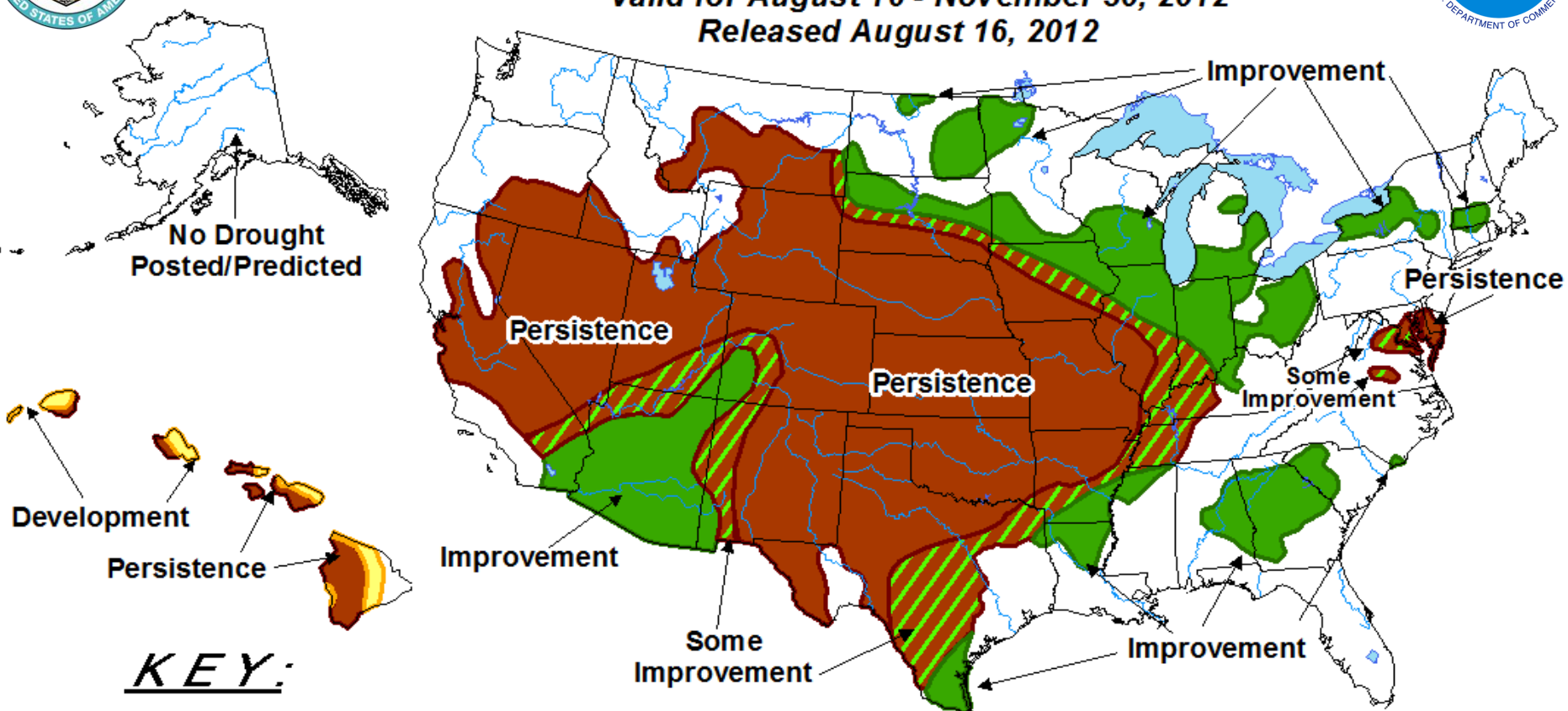
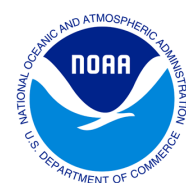




U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

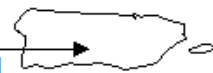
Valid for August 16 - November 30, 2012
Released August 16, 2012



KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

No Drought
Posted/Predicted



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Agricultural Impacts

- Estimated reduced yields in corn (13%) and soybeans (12%) – USDA.
- Some corn fields are a total loss, while other fields are cut for silage along with some early harvesting.
- Cooler temperatures across the Midwest and rain in the eastern Midwest in August have helped with soybeans more so than corn.
- Poor pasture, limited hay, and high feed prices, are causing a sell-off of herds.



© Aaron Greuel
PicturesWithoutPeople.com

Secondary Impacts

- Vulnerable water supplies at the farm level – ponds, creeks, shallow wells.
- Problems with low water levels on the lower Mississippi.
- Fire hazard from machinery during harvest.
- Depleted soil moisture this fall could be a problem for establishing winter wheat crop.



For More Information



Today's Presentation:

- <http://www.ncdc.noaa.gov/sotc/briefings>

NOAA's National Climatic Data Center: www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/

NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov

U.S. Drought Monitor: <http://droughtmonitor.unl.edu/>

Climate Portal: www.climate.gov

Illinois State Climatologist: <http://www.isws.illinois.edu/atmos/statecli/>

Media Contacts

- Brady.Phillips@noaa.gov, 202-407-1298 (NOAA/Comms)
- Katy.Vincent@noaa.gov, 828-257-3136 (NOAA/NCDC)